



File No. F0217

UNITED STATES PATENT AND TRADEMARK OFFICE

In re New Application of: Guenther O. Schenck

U.S. Application Serial No. 10/091,066

Filed: March 5, 2002

Group Art Unit: 3743

Examiner:

For: Method of Storing Solar Energy

Assistant Commissioner for Patents
Washington, D.C. 20231

RECEIVED

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TECHNOLOGY CENTER R3700

Dear Sir:

TRANSMITTAL OF THE PRELIMINARY EXAMINATION REPORT

Please find enclosed a copy of the International Preliminary Examination Report

MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231 on May 8, 2002.

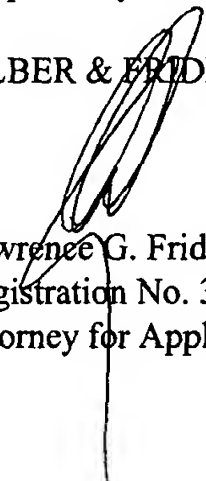
Name of person signing: Lawrence G. Fridman

Signature

which has been issued for the corresponding International Application PCT/EP00/08649. Entering into the Application and consideration of the Preliminary Examination Report by the Examiner are respectfully requested.

Respectfully submitted,

SILBER & FRIDMAN



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Translation

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

7

Applicant's or agent's file reference WO 4687.01	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP00/08649	International filing date (<i>day/month/year</i>) 05 September 2000 (05.09.00)	Priority date (<i>day/month/year</i>) 06 September 1999 (06.09.99)
International Patent Classification (IPC) or national classification and IPC C10B 53/02		
Applicant SCHENCK, Günther, O.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 14 March 2001 (14.03.01)	Date of completion of this report 24 October 2001 (24.10.2001)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-5	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-5	NO
Industrial applicability (IA)	Claims	1-5	YES
	Claims		NO

2. Citations and explanations

1. The indications made on page 3, line 30 to page 4, line 5 of the description of the present application can be regarded as the prior art closest to the subject matter of Claim 1. In that prior art wood, which has been cut, is to a large extent processed to produce wood products, which are not incinerated; a smaller portion of the wood is, however, incinerated. The existence of the wood provokes a reduction in CO₂ in the atmosphere, whereas the incineration increases the CO₂ in the atmosphere. A person skilled in the art would regard wood products that are not subject to incineration as, for example, wood used in construction or also furniture, that is products which can be used over a period of decades. It is clear to a person skilled in the art that such wood products store carbon, which was originally present as CO₂ in the atmosphere.

2. A person skilled in the art is also aware of general considerations for generating materials balances. A person skilled in the art knows, for example, that within a defined balance chamber, which should encompass atmospheric CO₂ and biomass produced by

means of photosynthesis, a net decrease in atmospheric CO₂ will have taken place by the end of a defined observation period if more CO₂ is converted into biomass than biomass into CO₂. The carbon-related difference in CO₂ corresponds to an equal enrichment of carbon in the form of biomass. The satisfaction of this balance condition is essential in order to realise the function of the method according to Claim 1 and to solve the problem addressed by the applicant (page 2, lines 10-12).

3. If an observation period is taken that extends from the first appearance of a tree or forest to the particular use of the products produced from that wood or to the incineration of that wood, a net enrichment of atmospheric CO₂ would take place, which stands opposite an enrichment of carbon in the form of wood. The closest prior art therefore discloses a combination of features that satisfies the balance condition and therefore realises the function of the method according to Claim 1.

The closest prior art does not disclose the converting of biomass into charcoal, the "long-term" storage (see Box VIII) of a substantial part of the charcoal and the production of energy from charcoal. The technical problem of interest therefore lies in finding these technical features.

4. It is general knowledge that wood can be converted into charcoal, that charcoal is storable and represents a solid carbon store, and that charcoal can be converted into energy if required. Consequently, the choice of charcoal for storing carbon and for producing energy is an obvious choice

of an alternative to wood which, in the combination of features of Claim 1, would satisfy the above balance condition. Said combination of features consists merely of a combination of method steps known per se. There is no recognisable functional interaction on which an inventive step could be established. Claim 1 therefore does not meet the requirements of PCT Article 33(3).

5. The feature of dependent Claim 2 is known per se, as is acknowledged by the applicant (page 5, lines 23-29 of the description). It is also known that oxidisable substances can be stored in an inert gas in order to suppress oxidation processes. The choice of CO₂ as inert gas is obvious. The choice of a mine for storing charcoal is also an obvious possibility. The combination of all these features does not result in any surprising technical effect or inventive functional interaction and is therefore an obvious combination of known method steps. Consequently, dependent Claims 2-5 also fail to meet the requirements of PCT Article 33(3).

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP00/08649

I. Basis of the report

1. This report has been drawn on the basis of (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

- ☐ the international application as originally filed.
- ☒ the description, pages 1-6, as originally filed,
 pages _____, filed with the demand,
 pages _____, filed with the letter of _____,
 pages _____, filed with the letter of _____.
- ☒ the claims, Nos. 1-5, as originally filed,
 Nos. _____, as amended under Article 19,
 Nos. _____, filed with the demand,
 Nos. _____, filed with the letter of _____,
 Nos. _____, filed with the letter of _____.
- ☐ the drawings, sheets/fig _____, as originally filed,
 sheets/fig _____, filed with the demand,
 sheets/fig _____, filed with the letter of _____,
 sheets/fig _____, filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 00/08649

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

In feature (c) of Claim 1 the relative expression "long-term storage" results in a lack of clarity, since the international application contains no information on the duration of the storage (PCT Article 6). For the purposes of this report it was assumed that the storage duration goes beyond the end of the observation period established for a materials balance.

PATENT COOPERATION TREATY

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NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

WEISSE, Jürgen
Bökenbusch 41
42555 Velbert
ALLEMAGNE

08. April 2002

Date of mailing (day/month/year) 25 March 2002 (25.03.02)	IMPORTANT NOTIFICATION International filing date (day/month/year) 05 September 2000 (05.09.00)
Applicant's or agent's file reference WO 4687.01	
International application No. PCT/EP00/08649	
Applicant SCHENCK, Günther, O.	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

CA,CN,JP,KP,KR,US

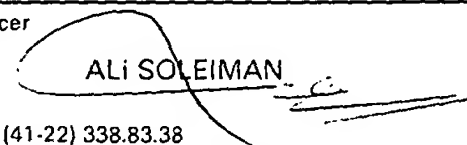
The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AP,EA,EP,AE,AG,AL,AM,AT,AU,AZ,BA,BB,BG,BR,BY,BZ,CH,CR,CU,CZ,DE,DK,DM,DZ,EE,ES,FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,MN,MW,MX,MZ,NO,NZ,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU,ZA,ZW,OA

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer  ALI SOLEIMAN Telephone No. (41-22) 338.83.38
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